



National Pharmacy Strategy

Initiatives



The National Pharmacy Strategy has 5 key thrusts that align to the key shifts in the healthcare transformation strategy



1. Pharmaceutical Care Excellence

Enhancing pharmacy services that bring health and value for everyone in our community



2. Confident Pharmacy Workforce

Providing a skilled, future ready and innovative pharmacy workforce



3. Re-design Supply Chain

Delivering seamless, convenient, accessible, affordable & safe medications at every point of care.



4. Information Enablement

Empowering people to get the best out of their medications and achieve care goals.



5. Technology Enablement

Delivering seamless and effective transition of care across all care settings through technology as an enabler.

Click on the initiatives below to learn more about them.

Pharmaceutical Care Excellence

1.1 Establish the role of pharmacy in the community care setting

Patients and consumers have increased access to trusted pharmacy services within community care, from receiving guidance and support on preventive health through to managing long term conditions.

1.2 Improve drug stewardship in non-acute care settings

Community pharmacy services will ensure that medication interventions are coordinated so that patients / consumers receive safe and effective use of medications to improve their health outcomes.

1.3 Establish collaborative models of care for medication reconciliation

Healthcare teams work in partnership with patients, empowering them to actively manage their medication list to get the best health outcomes.

1.4 Implement a clinical governance framework for medication management

A clinical governance framework supports medication management services to deliver care that is patient-focused, standards driven and consistent.

1.5 Promote pharmacists as part of the multidisciplinary healthcare team

Patients receive holistic care delivered by coordinated, integrated teams, which include pharmacy professionals, to deliver a seamless experience and engage patients and families along the care journey.

Confident Pharmacy Workforce

2.1 Implement Development Framework for Pharmacists

Competency continuum for pharmacists to progress from early career to advanced practice

2.2 Establish pharmacy residency programmes

Training for development of pharmacy specialists to provide specialized pharmaceutical care services to complex patients.

2.3 Enhance pre-registration -pharmacist training programme

A holistic programme that integrates experiential learning across settings for development of pharmacists at entry-level.

2.4 Develop and train pharmacy technicians

Developmental pathway to strengthen the core competencies of pharmacy technicians from entry to advanced levels.

2.5 Build up manpower capabilities for community care setting

Manpower capabilities will be developed to support community care practices.

2.6 Build capability in collaborative prescribing

Enhance the role of pharmacists as part of multi-disciplinary team-based care.

Re-design Supply Chain

3.1 Centralise procurement, packaging, compounding and distribution

Consolidating operational functions to drive efficiencies and economies of scale, giving patients and consumers affordable and readily available medications.

3.2 Deliver medications when patients need it, where patients need it

Patients / consumers have timely, convenient access to medications supported by expertise and advice from pharmacy services.

Information Enablement

4.1 Deliver a common platform to stimulate and share clinical, practice-based research and innovation

Sharing research, innovations and new ways of working will stimulate Pharmacy to address challenges in the healthcare landscape and transform practice to deliver better standards of care.

4.2 Increase consumer and patient access to contextualised health information and education

Access to personalised health information resources will empower patients and consumers to proactively manage their medications and health.

4.3 Establish a National Drug Formulary (NDF)

A national comprehensive resource to establish standardised and safe use of medications supported by best clinical practices.

Technology Enablement

5.1 Standardise drug terminology and code structures for seamless communication and accurate transfer of information

Standardised terminology and code structures will enable care providers to communicate more easily, ensuring a safe and seamless transition between care settings for patients.

5.2 Provide a common pharmacy system for harmonised medication dispensing and implement a national charging engine to streamline the medication-related billing process – NHIPS (National Harmonised Integrated Pharmacy System)

A common pharmacy system will harmonise dispensing and billing, enabling pharmacists to deliver a seamless, more cost-effective service.

5.3 Enhance telepharmacy services

Telepharmacy will deliver quality pharmaceutical care to patients in a manner that is convenient for them, at their point of need.



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[Click to return to Content page](#)

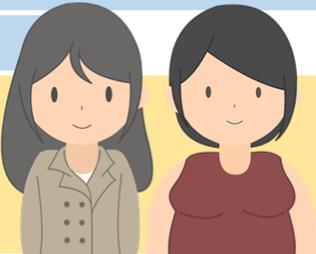
Objectives

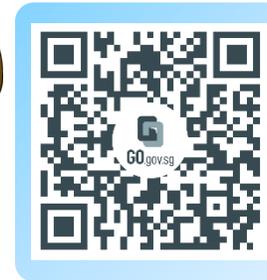
Patients and consumers have increased access to trusted pharmacy services within community care, from receiving guidance and support on preventive health through to managing long term conditions.

Pharmacy Services in the Community

Pharmacists can partner patients and consumers in different life stages, to meet their evolving healthcare needs.

Pharmacy Services available for different life stages

Living well	<ul style="list-style-type: none"> Advise over-the-counter products, pharmacy only medications and health supplements for wellness & preventive health Screening and assessments for vaccinations  <ul style="list-style-type: none"> Child Health Maternal Health 
Growing well	<ul style="list-style-type: none"> Minor ailment management Education and coaching on wellness and prevention Advise on medication and diseases Screening and assessments for vaccinations 
Keeping Well	<ul style="list-style-type: none"> Dispensing & counseling for prescriptions Advise on medication and diseases Minor ailment management Education & coaching on maintaining wellness  <ul style="list-style-type: none"> Screening and assessments for vaccinations, risk for prevalent diseases Recommendation on mobility aids, home therapy products, enteral feeds and surgical dressings  <ul style="list-style-type: none"> <u>Pharmaceutical Care Services (PCS) for patients with chronic disease</u>
Leaving well	<ul style="list-style-type: none"> Palliative Care 



Click [here](#) to find out more about NPS&U videos

[Click here to find out more about PCS](#)

Objectives

Delivering Pharmaceutical Care Services (PCS) to **empower and support** seniors & caregivers to manage medications independently in the community

What is PCS?

- ✓ Understand the challenges faced by seniors and caregivers with medications given by various prescribers when they are at home
- ✓ Engage seniors and caregivers to develop a personalised plan to take their medications
- ✓ Coordinate with multi-disciplinary care team across care settings
- ✓ Regular follow-up with seniors and caregivers on changes on medications
- ✓ Engagement of lay extenders to help seniors and caregivers

Who will receive PCS?

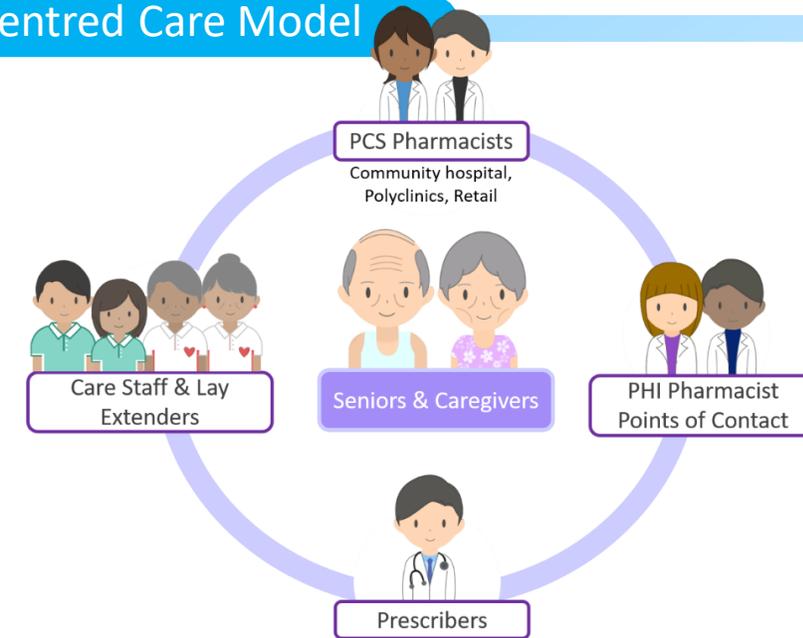
- Target 2000 seniors in:
- ✓ Senior Care Centres
 - ✓ Senior Activity Centres with Comm Nurse Post

- Inclusion Criteria:
- ✓ ≥ 5 meds or ≥ 12 doses daily + ≥ 3 providers OR
 - ✓ Need help with managing

Timeline

- ✓ PCS 3 year study will commence from FY2021

Person Centred Care Model



Benefits

- ✓ Empower seniors and caregivers to self manage their own medications
- ✓ Strengthen pharmacy support for seniors and caregivers in the community

Objectives

Community pharmacy services will ensure that medication interventions are coordinated so that patients / consumers receive safe and effective use of medications to improve their health outcomes.

What it entails

Development of guidelines for stewardship programmes

Educating healthcare professionals within non acute care settings to implement drug stewardship into daily practice

Collaboration between pharmacy professionals as well as nurses and clinicians to ensure that interventions are coordinated and delivered appropriately, and there is sufficient clinical oversight.

Development of stewardship accreditation for non acute care settings

Benefits

- ✓ Patients receive the right drug, right dose at the right time and for the right duration.
- ✓ Improved patient outcomes through optimised medication use, implementation of cost-effective therapy and reduction of preventable adverse drug events.

[Click to return to Content page](#)

Objectives

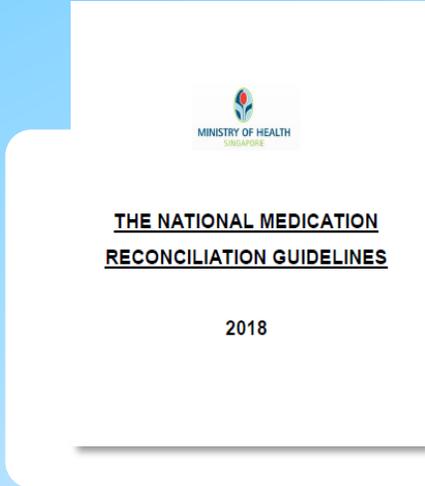
Healthcare teams work in partnership with patients and/or caregivers, empowering them to actively manage their medication list to get the best health outcomes.

National Medication Reconciliation Guidelines

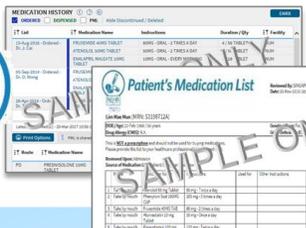
- ✓ Launched in 2018, the guidelines help healthcare professionals understand and perform medication reconciliation and to create Patient's Medication Lists (PML) at appropriate points of the care continuum.
- ✓ Standardization of the medication reconciliation process helps to ensure patient safety throughout the care continuum, support person-centred care and facilitate sharing of information

Secure Sharing of Patient's Medication List

- ✓ Healthcare teams are now able to leverage the National Electronic Health Records (NEHR) and HealthHub platforms to **securely communicate** patient medication information with patients, caregivers and other healthcare professionals.
- ✓ Patient's medication list from the NEHR PML module can be **shared with patients and caregivers** through the HealthHub My Medication app and through copies from the NEHR PML module, empowering them to actively self-manage their medications



Click [here](#) to access the guidelines.



[Click to return to Content page](#)

Objectives

A clinical governance framework supports medication management services to deliver care that is patient-focused, standards driven and consistent.

What it entails

- ✓ Establishing national policies for medication management to ensure effective clinical governance and patient safety
- ✓ Setting national standards for medication management to implement clinical governance and patient safety
- ✓ Embedding governance and quality standards into daily clinical practice
- ✓ Setting outcomes to achieve positive patient experience

Benefits

- ✓ Promote standardised high quality services
- ✓ Ensure consistent quality and value of services
- ✓ Harmonised service evaluation measures to track service impact and patient experience

Some recent examples

- ✓ MOH Pharmaceutical Care Services Guidelines
- ✓ MOH Medication Reconciliation Guidelines



Pharmaceutical Care Services (PCS)

Medication Reconciliation

Adherence and knowledge assessments

Medication Optimisation

Patient Counselling

[Click to return to Content page](#)

Objectives

Patients receive holistic care delivered by coordinated, integrated teams, which include pharmacy professionals, to deliver a seamless experience and engage patients and families along the care journey.

What it entails

Definition of the pharmacists' role and their competencies needed within multi-disciplinary teams

Education & training of pharmacists on roles & responsibilities in multidisciplinary team to practice at the top of their license

Development of outcome measures for pharmaceutical care to help establish clinical priority models of care

Execution of new models of care and evaluation of outcomes



Benefits

- ✓ Patients receive comprehensive holistic care from combined expertise of multidisciplinary teams
- ✓ Positive patient and caregiver experience through seamless, coordinated care

[Click to return to Content page](#)

Objectives

1. To provide clarity on scope of practice and the competencies required for pharmacists in different levels of practice
2. To facilitate effective use of resources for training and development of pharmacists
3. To promote a culture of lifelong learning

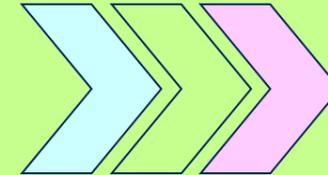
Benefits

- ✓ To learn the building blocks of successful pharmacists, for today and tomorrow
- ✓ To prepare for healthcare transformation towards better care for patients
- ✓ To equip pharmacists to lead change in healthcare transformation



Competency continuum of Pharmacists for progression towards 8 key roles

1. Care Provider
2. Collaborator
3. Communicator
4. Leader
5. Advocate
6. Manager
7. Educator
8. Researcher - Innovator



7 competency domains for seamless transition from foundation to advanced practice



Enables systematic progression and continuous professional development



Scan to find out more!

Objectives

To groom pharmacy specialists via the broad-based pharmacotherapy R1 residency and specialty-specific R2 residency programmes.

National Pharmacy Residency Programmes

- Established since 2016, the national R1 and R2 programmes have enrolled a total of 10 R1 and 23 R2 residents respectively to date.
- The robust training and assessment framework is designed and delivered based on standards prescribed by the PSAB* and PREC**, with rigorous portfolio-based R2 exit assessment process to certify resident's competency attainment.
- Post-residency specialty practice portfolio will also be required to meet the PSAB's specialist accreditation requirements.
- **Value-added services of pharmacy specialists** include developing and leading specialty-related clinics and services (e.g. Oncology/Cardiology/Paediatric Medication Management services; Geriatric Complex Care Clinic, Clozapine Clinic), providing drug advisory/consults to multidisciplinary care team (e.g. ASP and ICU ID rounds), driving quality improvement of medication use system, and contributing to pharmacy education, training, research and professional leadership.

*PSAB = Pharmacy Specialists Accreditation Board **PREC = Pharmacy Residency Exam Committee

RESIDENCY YEAR 1 (R1)

12-month Broad-based Residency to develop professional and clinical competencies in the delivery of patient-centred and high quality pharmaceutical care



RESIDENCY YEAR 2 (R2)

12-month Specialty Residency to develop accountability, practice patterns and expert knowledge, skills, attitudes, and abilities in the specialised areas of pharmacy practice



Specialty Practice Experience (1 to 3 years)

PHARMACY SPECIALIST ACCREDITATION

The 7 PSAB-recognised specialties are in Cardiology, Critical Care, Infectious Diseases, Geriatric, Oncology, Paediatric and Psychiatric Pharmacy.

Objectives

The SPC Competency Standards Review Committee was set up in January 2021:

1. To review the SPC's Competency Standards for Pharmacists for integration to the Development Framework for Pharmacists
2. To improve the training curriculum, assessment framework and manuals for preceptors and pre-registration pharmacists
3. To ensure alignment of competency standards, Entrustable Professional Activities (EPA) and NUS B. Pharm curriculum
4. To recommend a robust method for accreditation of essential and elective pre-registration training rotation sites

Benefits

- ✓ Seamless transition from university to pharmacy workplace
- ✓ More structured and robust pre-registration pharmacist's training and assessment framework
- ✓ Better quality assurance of training sites

PRE-EMPLOYMENT CLINICAL TRAINING (PECT) (in-course)

2 x 12 weeks of rotations across retail/polyclinic pharmacies, specialty centres, ILTC facilities, pharma Industry and HSA



PRE-REGISTRATION PHARMACIST TRAINING (post-course)

2 x 12 weeks of rotations across acute care and ambulatory care settings in PHIs and specialty centres



REGISTRATION WITH SINGAPORE PHARMACY COUNCIL

To pass SPC's Competency Exam prior to registration

[Click to return to Content page](#)

Objectives

To develop a confident and adaptive pharmacy support workforce from entry-to-practice to advanced level

Entry-to-Practice Competency Standards

- The Entry-to-Practice Competency Standards for pharmacy technicians was first published in December 2015
- For implementation of the competency standards, the **Entry-to-Practice (ETP) competency assessment framework** for pharmacy technicians was developed by the Pharmacy Technicians Training and Development Committee
- The updated competency standards document (V2.1) was published in June 2021

Skills Framework for Healthcare

Skills Framework for Pharmacy Support Workforce was launched in April 2019, with **3 Career Tracks for Pharm Techs:**

1. Patient Care Service
2. Pharmacy IT and Supply Chain
3. Drug compounding and Quality management



Advanced Diploma in Pharmaceutical Science

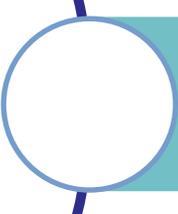
- **18-month structured Earn-and-Learn Programme** to strengthen the core competencies of pharmacy technicians
- Launched in collaboration with Nanyang Polytechnic in April 2017, 106 pharmacy technicians have been enrolled and 69 have graduated (as of May 2021)

[Click to return to Content page](#)**Objectives**

To raise competencies of pharmacists in community practice with broad-based knowledge and skills from preventive to end-of-life care to practice community

Development Plan for Community Practice**Structured foundation training**

On-the-job training for seamless transition towards advanced practice

**Graduate Certificates in Community Practice**

Part-time blended learning with community attachments

**Community of Practice**

For sharing of best practices and sector-wide peer support networking

Graduate Certificates for Community Practice

1. Advanced Pharmacy Practice (by NUS Pharmacy) – Launched in August 2020
2. Community-based Geriatric Pharmaceutical Care (by NUS Pharmacy) – Launched in January 2021

[Click to return to Content page](#)

Objectives

Empowering pharmacists for collaborative prescribing practice through National Collaborative Prescribing Programme (NCPP)

National Collaborative Prescribing Programme

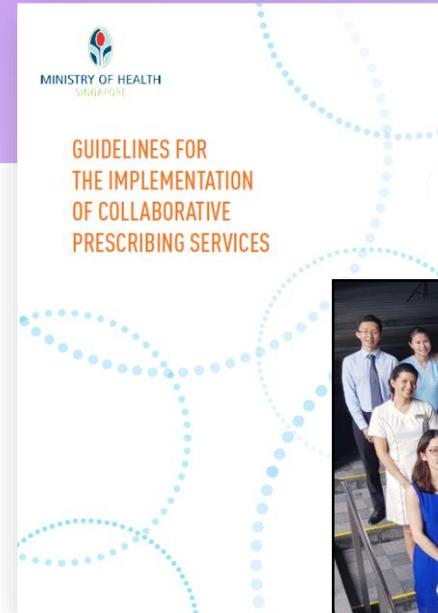
- Equip pharmacists with prescribing competencies and hands-on training
- Practice and apply collaborative prescribing competencies in clinical settings
- Attain the prescribing competencies via a single formative and summative assessment framework

Timeline of activities

- 102 pharmacists have completed NCPP since March 2018

Benefits

- ✓ Pharmacists are empowered to prescribe medicines and order tests within a collaborative framework overseen by doctors
- ✓ Enable expansion of pharmacist-led patient care services



Scan to find
out more!



Graduation of Inaugural Cohort of the NCPP in July 2018

[Click to return to Content page](#)

Objectives

To provide greater accessibility and improve affordability for patients by deriving gains from economies of scale and through consolidating operational functions for efficiencies.

ALPS

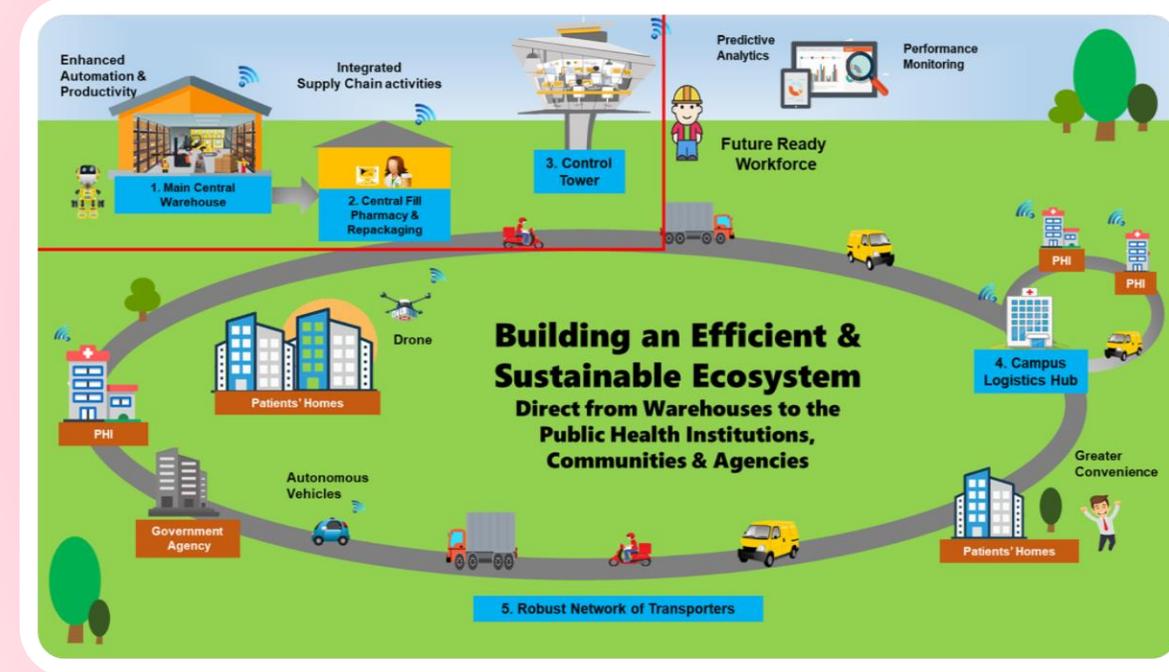
ALPS Healthcare is Singapore's national integrated supply chain management company that amalgamate the supply chain functions and resources of all three healthcare clusters aiming to

- ✓ Transform and strengthen the national public healthcare supply chain landscape – from sourcing, procurement, warehousing to on-site logistics
- ✓ Develop innovative models and build new capabilities in procurement and supply-chain management

Benefits

- ✓ Improve cost savings, efficiency and productivity
- ✓ Scalable to meet increasing demands & ensure supply chain resiliency
- ✓ Improve overall patient experience & confidence

Future Integrated Landscape



ALPS partnered with MOH and PHI in the design of the National Central Fill Pharmacy, medication delivery network and other initiatives.

Objectives

To achieve system benefits of Safety, Quality and Resilience for the public healthcare sector with respect to sterile drug compounded products

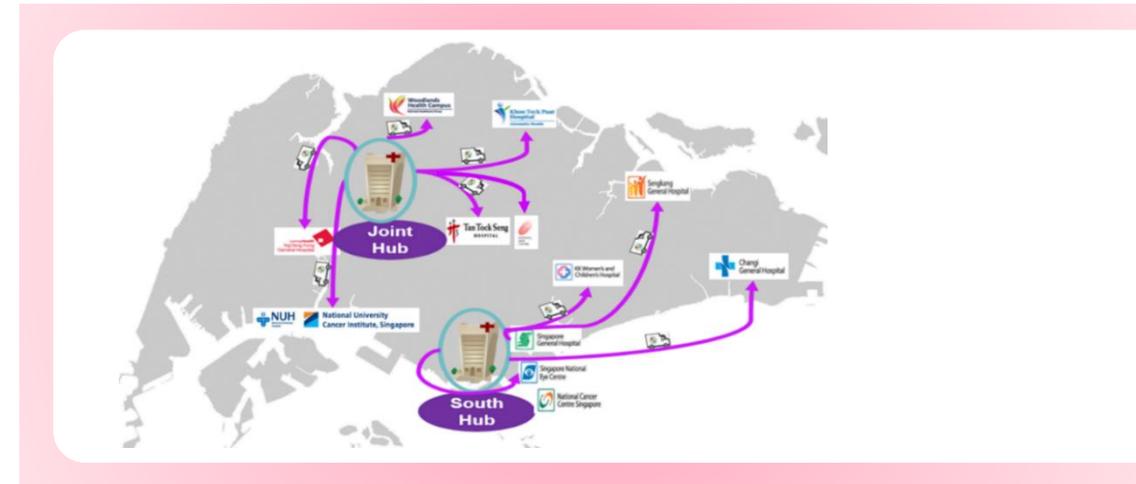
Hub & Spoke Model

First in Southeast Asia Hub-and-Spoke model in hospital pharmacy setting
Pharmacy compounding laboratory (hubs) will be built to PICS GMP standards and supply to compounded sterile products (CSPs) to other PHIs (spokes)

Two cytotoxic and non-cytotoxic hubs each
SGH and NCCS hubs at SHS will start operation from 2021 and 2022 respectively

Benefits

- ✓ Improved medication safety with automation and GMP certified Hubs, provision of readily usable dosage form including high alert medications
- ✓ Improved staff safety by leveraging on technology & reduce cytotoxic exposure
- ✓ Build system resilience & continuity
- ✓ Enable pandemic preparedness
- ✓ Build up compounding capability for Singapore
- ✓ Cost saving from lower headcount including nursing staff



Regulation of CSP (Under discussion)

- ✓ Enhanced regulation of category 2 CSPs to be manufactured in PICS GMP facility.
- ✓ Multiple different products combined into a preparation
- ✓ Multi-day/multi-dose prep (e.g. infusion pumps)
- ✓ New dosage form (e.g. preparation of eye-drops from injections) and/or
- ✓ Batch production (i.e. usage is anticipatory, no named patient at point of preparation)
- ✓ Other categories of CSPs will follow MOH guideline

[Click to return to Content page](#)

Objectives

To establish the NCFP to transform medicine delivery service that is integrated with pharmaceutical care services to meet patients' needs.

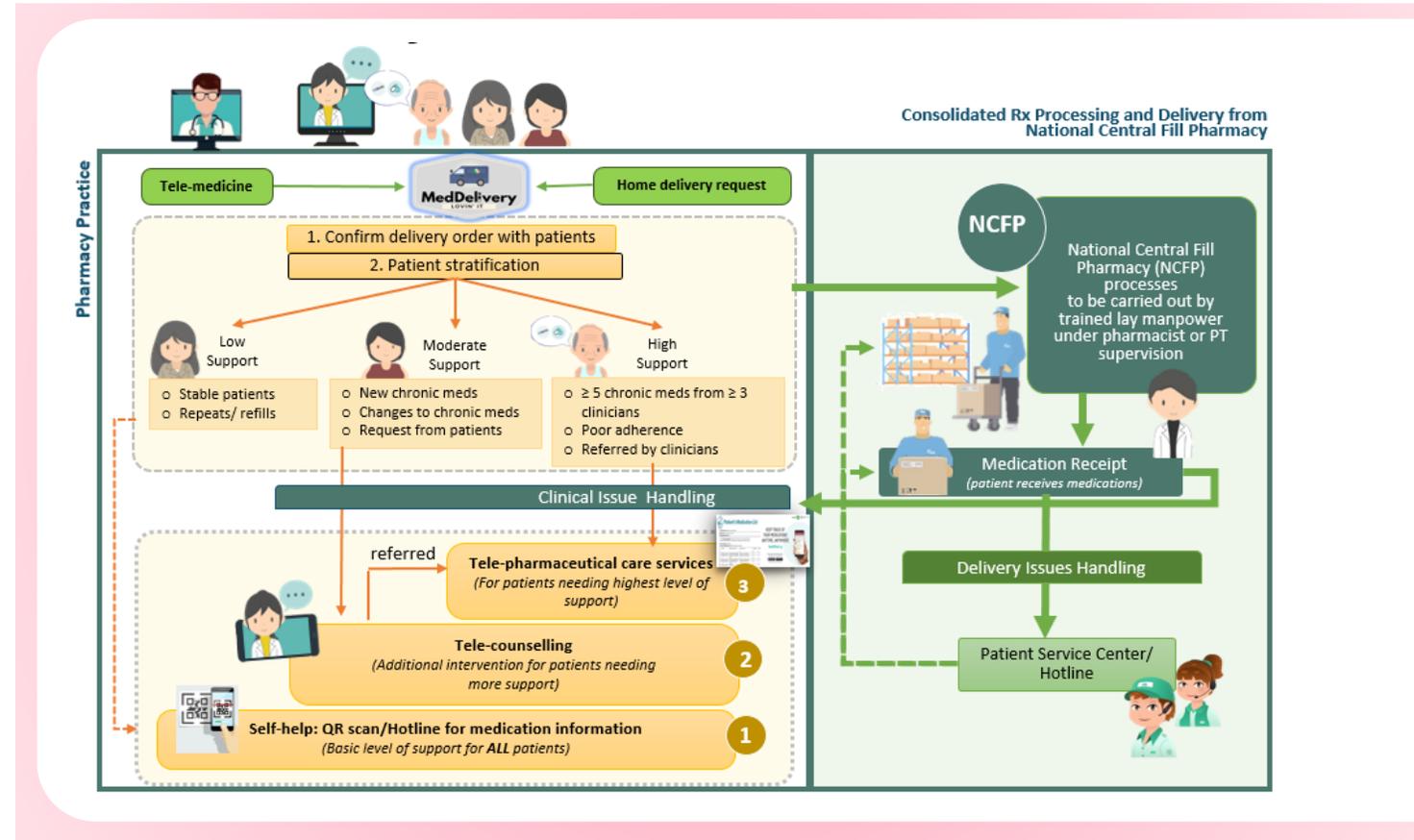
What is NCFP?

Consolidate and leverage on technology for preparation of medicine for delivery to patients' preferred location.

Supported by enhanced pharmacy practice model to provide appropriate care for all patients using the medicine delivery service.

Benefits

- ✓ Build system resilience & continuity to enable pandemic preparedness
- ✓ Lower medicine packing, delivery & administrative related costs
- ✓ PHIs can focus more on direct patient care delivery
- ✓ Consolidated patients' medicine list to empower ownership
- ✓ Improved patient and caregiver satisfaction & confidence through more convenient and timely access to pharmaceutical expert advice



Timeline

Phased approach with the launch of first phase in Q3 FY2022

Objectives

Sharing research, innovations and new ways of working will stimulate Pharmacy to address challenges in the healthcare landscape and transform practice to deliver better standards of care.

Pharmacy Innovations in Practice (PhIP) Programme

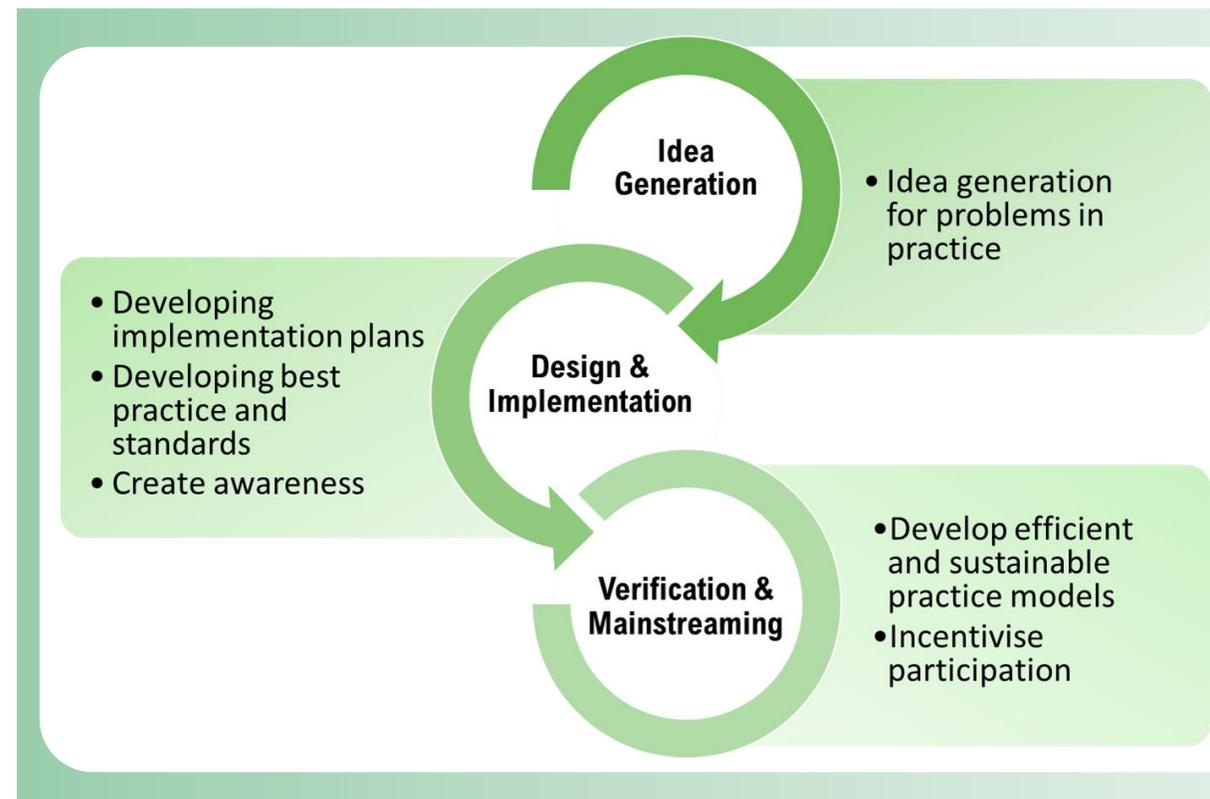
Pharmacists who need help with the following can tap on the program platform to help them to translate innovative pharmacy practice ideas into pilots or mainstream practices

- ✓ Solving a problem or conceptualising their ideas
- ✓ Implementing their innovations in practice
- ✓ Rolling out their innovations into mainstream practice

Benefits

Through the program, organisations can be connected with:

- ✓ Leaders/ partners for guidance and sharing of perspectives
- ✓ Expertise/ resources for help & advice in methodological design of feasibility studies.
- ✓ Partners to co-create new practice workflows, policies & implementation plans, as needed.
- ✓ Relevant authorities for discussion and fulfillment in accordance to regulatory requirements, guidelines & standards.



For more information, contact us at nps@moh.gov.sg

[Click to return to Content page](#)

Objectives

To increase patient and consumer access to contextualised health information and education so that they can proactively manage their medications and health

Contextualized health information

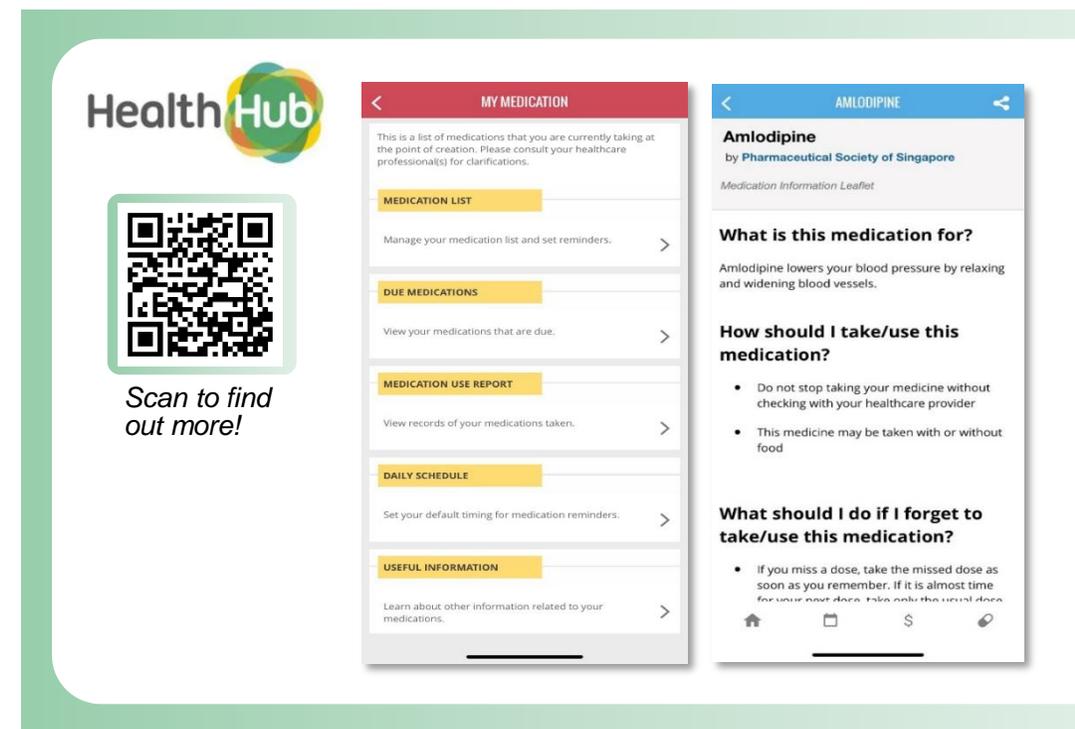
- ✓ Development of harmonised Medication Information Leaflets (MILs) and materials that are contextualised to the local context by local pharmacists and doctors*
- ✓ MILs are publicly accessible via HealthHub [Medication A-Z](#).
- ✓ MILs are also contextualized to patient's own medication list via HealthHub My Medication mobile application.

Benefits

- ✓ Patients and consumers have access to trusted information about the medications that they are taking at their fingertips
- ✓ Healthcare professionals can use the information during patient counselling
- ✓ Promotes patient education, engagement and empowerment

Progress

- ✓ To date, ~300 harmonized MILs* are published in the HealthHub Medication A-Z, reaching more than 500k page views from Jan to Aug 2021.



*Materials are jointly reviewed by multi-professional team through the Pharmaceutical Society of Singapore-National Medication Information (PSS-NMI) Workgroup. The workgroup consists of cluster partners (National Healthcare Group, National University Health System and SingHealth), community pharmacies (Guardian, Unity and Watsons) and Pharmaceutical Society of Singapore.

[Click to return to Content page](#)

Objectives

To establish a Singapore specific and authoritative national reference to guide evidence-based best practices for medication prescribing, dispensing and administration by consolidating clinical and drug related information.

NDF Content

- A list of drugs that are registered in Singapore
- A list of drugs with government subsidies
- Links to subsidy information, local drug safety information and clinical guidance where relevant

NDF Access

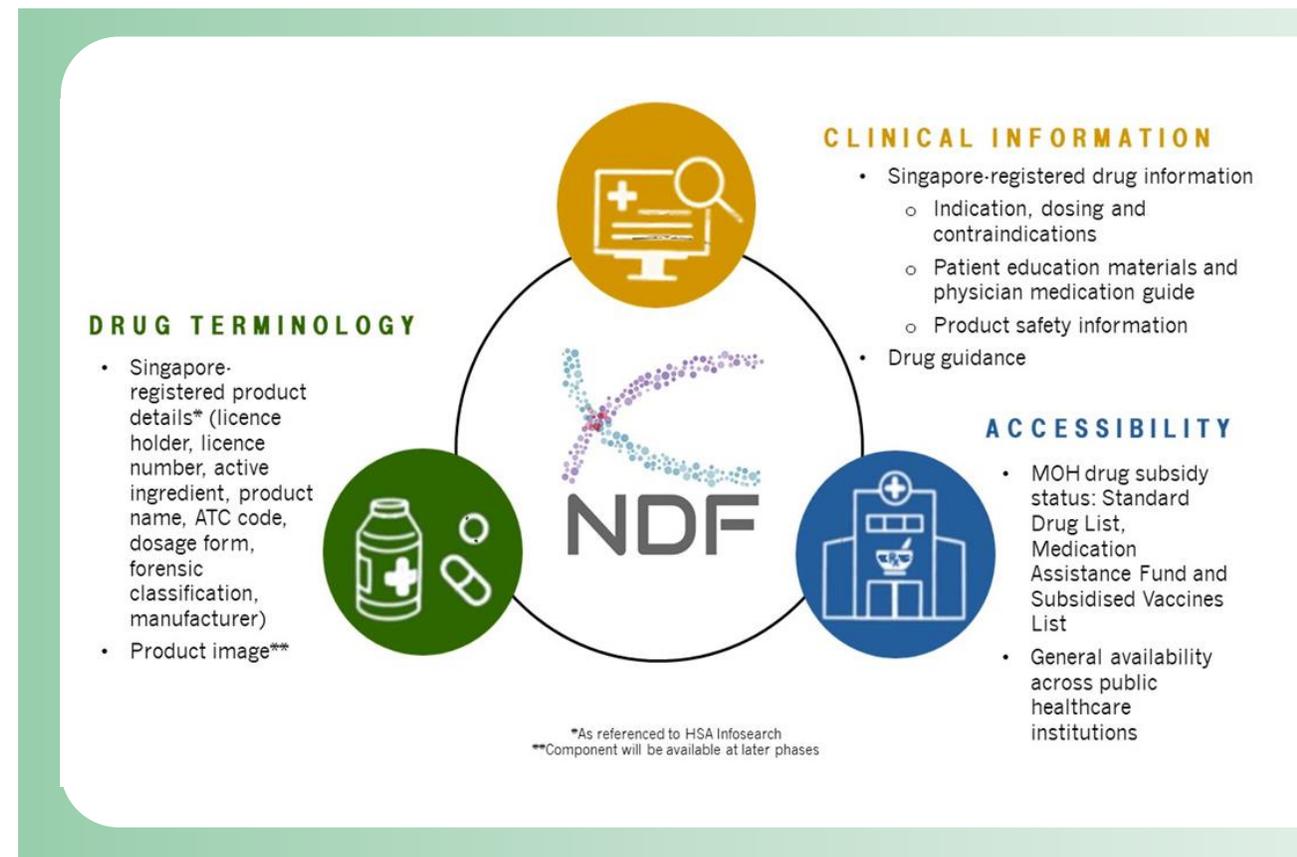
Hosted on a publicly accessible website

Target audience:

- Healthcare professionals
- Public

Benefits

- ✓ Help HCPs in Singapore make better-informed decisions in a confident manner and influence the appropriate use of drugs in Singapore
- ✓ Promote patient education and empowerment



Objectives

To achieve safe, unambiguous and seamless medication information exchange and interoperability for all healthcare settings in Singapore to improve medication safety

What is SDD?

- A national terminology standard for medicines
- Includes standardized, consistent descriptions
- Needs to meet diverse requirements of different users and cater for new innovative products

SDD Scope

- HSA registered drugs
- Exemption and extemporaneous drugs
- Single and multi-ingredient vitamins

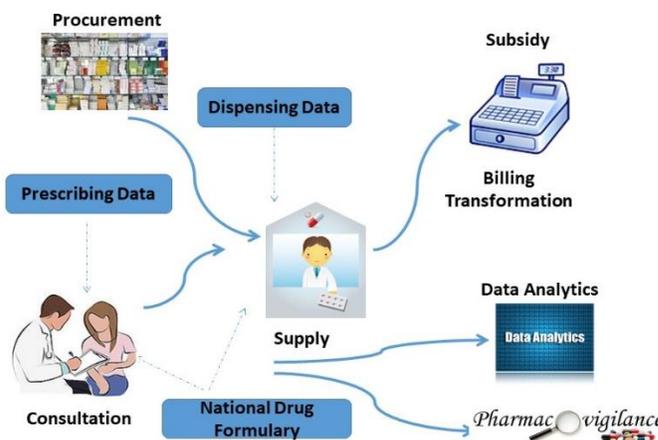
Benefits

- ✓ Enables unambiguous identification, coding & interpretation of medicines
- ✓ Facilitates seamless exchange of medicines information

*SDD = Singapore Drug Dictionary

Completed Implementations

- ✓ Prescribing and Dispensing Systems
 - All PHIs
 - 5 CHs
- ✓ ALPS (drugs)
- ✓ GPCConnect
- ✓ MAF Drugs
- ✓ NHELP
- ✓ PACES
- ✓ NEHR



Planned Implementations

- OMNII
- N-HIPS
- Billing Transformation
- Vaccine Subsidy (SVL)
- Private HCPs (*through NEHR onboarding*)
- Singapore Medicines Supporting Terminology (SMST)
e.g. Dose Form, Route, Frequency, etc

Objectives

To consolidate patient medication management and supply at the public healthcare pharmacies onto a common digital platform, enabling more efficient work processes and access to service or information by the patients, which will transform the care delivery.

What is NHIPS?

- ✓ A common pharmacy system for harmonised medication dispensing and leveraging on a national charging engine for harmonised medication-related billing.
- ✓ Transformation of outpatient medication management and supply through consolidating the multiple current isolated pharmacy systems, from being provider-centric to one that puts the patient at the center of outpatient medication supply.

Milestones

- Nov-19 – Project Award
- Feb 20 – Project Kick-Off
- Jun-19 – Start of Scrum Development
- Dec-20 – Establishment of Product Roadmap
- **Apr-23 – First Site Go-Live**

Benefits



Patients and Caregivers

Improve accessibility of medications to all patients where and when they need it for seamless patient care.
Facilitate multi-channel communication for patients and caregivers.



Service Provider

Facilitate pharmacists to access comprehensive medication history and patient active medication list for medication reconciliation.



National Level

Facilitate medication information exchange and system interoperability through data standardization and harmonization.

[Click to return to Content page](#)

Objectives

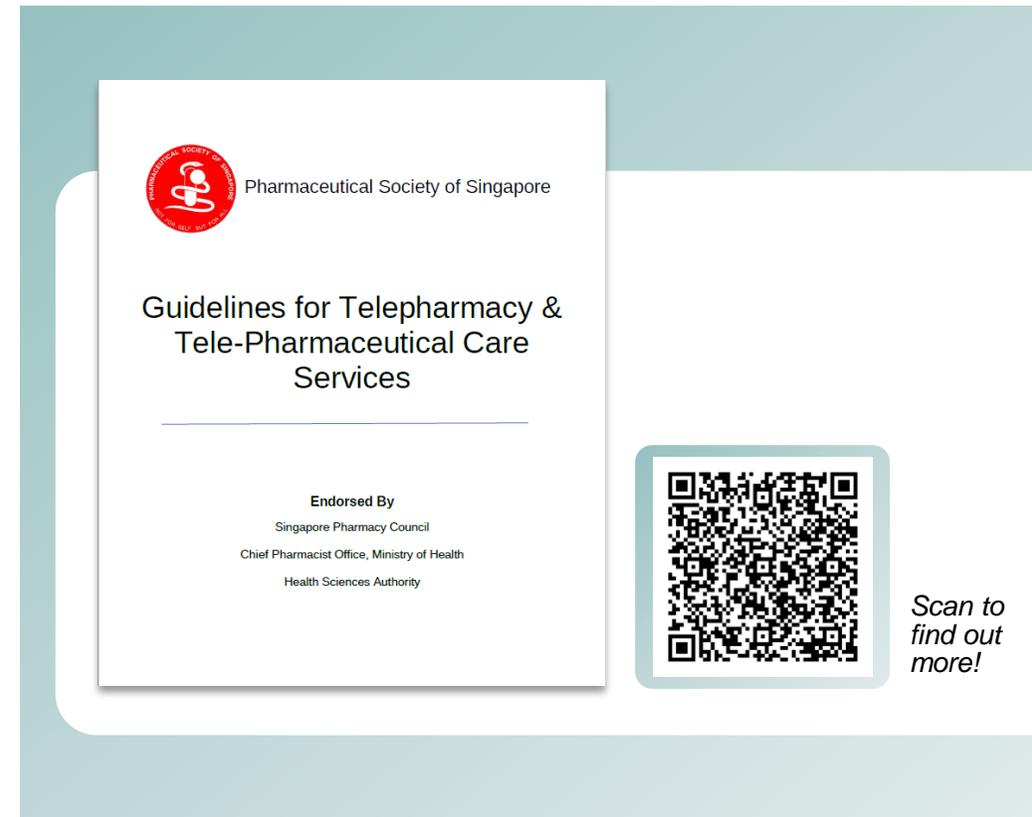
Use of telepharmacy to deliver quality pharmaceutical care to patients in a manner that is convenient for them, at their point of need.

Telepharmacy and Tele-Pharmaceutical Care Services

- Retail pharmacies providing such services should refer to the *Pharmaceutical Society of Singapore (PSS)* [Guidelines for Telepharmacy and Tele-Pharmaceutical Care Services](#) for the definitions, regulatory requirements and safeguards in the provision of these services.

Benefits

- ✓ More structured and standardized adoption of telepharmacy and tele-pharmaceutical care services across the care continuum to ensure patient safety, support person-centred care and facilitate sharing of information





National Pharmacy Programme Management Office

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